

EXHIBIT B

PATENT**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE***In re Application of:*Issam RAAD, Hend A. HANNA, and Nabeel
NABULSI

Serial No.: 10/044,842

Filed: January 11, 2002

For: NOVEL ANTISEPTIC DERIVATIVES
WITH BROAD SPECTRUM
ANTIMICROBIAL ACTIVITY FOR THE
IMPREGNATION OF SURFACES

Group Art Unit: 1744

Examiner: Jastrzab, Krisanne Marie

Atty. Dkt. No.: UTSC:669US

DECLARATION OF RAY HACHEM

I, Ray Hachem, hereby declare as follows:

1. I am a citizen of the U.S., currently residing at 105 Calvi Court, Bellaire, Texas 77401.

2. I currently hold the position of Assistant Professor, Chairman, Division of Internal Medicine Basic Research Committee, The University of Texas M. D. Anderson Cancer Center. A copy of my curriculum vitae, which includes a list of my publications, is attached as Appendix A.

3. I am a skilled expert in infectious disease therapy and control. My expertise in this area is evidenced by the following:
 - I am an Assistant Professor in the Department of Infectious Diseases, Infection

Control and Employee Health, Division of Internal Medicine at The University of Texas M. D. Anderson Cancer Center and was recently appointed as the Chairman of the Basic Science Research Committee for the Division of Internal Medicine.

- I have a total of 94 publications in peer-reviewed journals pertaining to infectious diseases, with two additional publications *in press*.
- In almost 60% of those publications I served as a lead author (first, second, third or last).
- Since my appointment as Assistant Professor in 2001, I have a total of 67 publications on which almost 55% I served as lead author.
- I have published in a large number of prestigious journals, including *New England Journal of Medicine*, *Annals of Internal Medicine*, *Medicine*, *Antimicrobial Agents and Chemotherapy*, *Clinical Infectious Diseases*, *Cancer*, *Infection Control and Hospital Epidemiology*, *Lancet Infectious Diseases*, and *Journal of Infectious Diseases*.
- I have been instrumental in leading animal studies on the testing of antimicrobial catheters at M. D. Anderson Cancer Center and have served as a senior author on several publications exploring the role of the silver iontophoretic catheter as well as the antibiotic-coated catheter. More recently, I have been conducting animal studies exploring the role of novel antiseptic catheters in preventing urinary tract infections. In addition to the animal studies, I have been heavily involve in antimicrobial catheter clinical studies that were published in prestigious journals, including *New England Journal of Medicine* and *Annals of Internal Medicine*.
- I have published in 2004 (Hachem et al. *Infection Control and Hospital*

Epidemiology 25(5);391-394, 2004) a study showing that the Molecular typing of resistant bacteria (vancomycin-resistant enterococci) was essential in the prevention of VRE bloodstream outbreaks among patients with hematologic malignancy at M. D. Anderson Cancer Center.

4. I have reviewed the above-referenced patent application and the currently pending claims.
5. I have been asked whether the results set forth in the above-referenced patent application, the first Declaration of Dr. Raad (Exhibit A), and the second Declaration of Dr. Raad (Exhibit B) demonstrate that the presently claimed invention, which involves the combinations of basic reagents and dyes within a particular range of molar ratios, demonstrates a synergistic antiseptic effect compared to either dye alone or basic reagent alone.
6. Attached as Exhibit C is a copy of the 2007 instructions to authors from the Journal "Antimicrobial Agents and Chemotherapy." These instructions were published in Antimicrobial Agents and Chemotherapy, vol. 51, No. 1, pp. 1-22, Jan. 2007. Page 21 of this reference provides a definition of synergy as follows:

Synergy is defined in two-dimensional or checkerboard tests when the fractional inhibitory concentration (FIC) or fractional bactericidal concentration (FBC) index (Σ) is ≤ 0.5 . In killing curves, synergy is defined as a $\geq 2\text{-log}_{10}$ decrease in CFU per milliliter between the combination and its most active constituent after 24 h, and the number of surviving organisms in the presence of the combination must be $\geq 2\text{-log}_{10}$ CFU/ml below the starting inoculum. At least one of the drugs must be present in a concentration which does not affect the growth curve of the test organism when used alone.

Based on the data presented in the declarations, I believe that there is overwhelming synergy data (particularly on the surfaces of coated medical devices) described in the text of the patent application (UTSC:699US), as well as subsequent research done, enough to distinguish it from all prior art identified by the examiner.

In evaluating the activity of antimicrobial devices by zones of inhibition (ZOI), as presented in the body of the original application/declaration (Declaration 1), I will be using the term "Synergism or Synergy" to mean that the combined action (ZOI) of Gentian Violet (GV) and chlorhexidine (CHX) produces a total effect greater than the expected sum of the effects (ZOI) of the chemicals separately (e.g. $1 + 1 = 3$ or greater, rather than the expected 2).

Here are the evidences of synergy as per the results published in UTSC:699US:

- 1) Tables 2 and 3, on page 20, show ZOI produced by coated endotracheal PVC Tubes (using DCM or MeOH). Page 20 of the patent application publication says, "As shown in Tables 2 and 3, endotracheal PVC tubes impregnated with Gendine are far more effective against all organisms when compared with those impregnated with CHX, and more effective than PVC tubes impregnated with GV against *Pseudomonas aeruginosa*."
- 2) Table 4, on page 21, shows ZOI produced by coated silicone catheters. Page 21 states, "data in table 4 shows how silicone catheter impregnated with gendine are more effective in inhibiting MRSA, PS and *C. parapsilosis* than catheters impregnated with either GV or CHX."

3) Table 5, on page 21, shows ZOI produced by coated polyurethane catheters (PU). Page 21 states, " PU catheters impregnated with gendine are more effective than PU catheters impregnated with GV in inhibiting *Pseusomonas aeruginosa*, and more effective than PU catheters impregnated with CHX against all three organisms, MRSA, PS and *C. parapsilosis*."

4) Table 6, on page 22, shows ZOI produced by coated silk sutures. Section Page 21 states, " silk sutures impregnated with gendine are significantly more effective in inhibiting MRSA, PS and *C. parapsilosis* than sutures coated with either GV or CHX."

5) Similarly, tables 7-10, on pages 25-25 show similar synergy against various bacterial and fungal organisms, when GV was combined with other basic reagents on the surfaces of medical devices.

6) Furthermore, based on the definitions of synergy as published in *Antimicrobial Agents and Chemotherapy* (the main journal of the American Society for Microbiology), vol. 51, No. 1, pp. 1-22, Jan. 2007, it is clear that Dr. Raad, Dr. Hanna and colleagues have demonstrated such synergy in their study on novel alcohol-free antiseptic mouthwash (Bahna et al. *Oral Oncology* 43:159-164, 2007) as clearly described in Table 1 (page 161) and Table 2 (page 162).

8. The results set forth in the specification and the data that is cited in the first and second Declarations of Dr. Raad clearly establish that compositions that include a dye and basic reagent in the molar ratios set forth in the claims exhibit surprising and unexpected synergy for

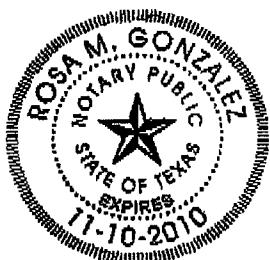
disinfecting and/or sterilizing surfaces or a fluid compared to dye alone or basic reagent alone.

9. I hereby declare that all statements made by my own knowledge are true and all statements made on information and belief are believed to be true and further that statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment under § 100 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of this application or any patent issued thereon.

Date 10/31/07



Ray Hachem, MD
Assistant Professor
Chairman, Basic Science Research
Committee, Division of Internal
Medicine



APPENDIX A

CURRICULUM VITAE

Ray Y. Hachem, MD

PRESENT TITLE AND AFFILIATION

Primary Appointment
N/A

Dual/Joint/Adjunct Appointment/Ad Interim
N/A

CITIZENSHIP

United States

HOME ADDRESS

105 Calvi Ct
Bellaire, Texas 77401
Phone: (713) 666-5736
Cell: (713) 907-8239

OFFICE ADDRESS

The University of Texas M. D. Anderson Cancer Center
1515 Holcombe Boulevard
Unit Number: 402
Houston, Texas 77030
Room Number: Faculty Center - FC3.205
Phone: (713) 792-6830
Fax: (713) 745-6839

EDUCATION

Degree-Granting Education

Wharton Junior College, Wharton, Texas, BA, 1980, Science

The University of Texas, Austin, Texas, BS, 1983, Chemical Engineering, (Minor: Biomedical Engineering),
University of Santiago, Santo Domingo, Dominican Republic, MD, 1986

Postgraduate Training

Research Assistant, Baylor College of Medicine, Pharmacology Department, Houston, Texas, Dr. Bush, 5/1980-9/1980

CREDENTIALS

Board Certification
N/A

Licensures
Active
N/A

Inactive
N/A

EXPERIENCE/SERVICE

Academic Appointments

Postdoctoral Fellow, Department of Medical Specialties, Infectious Diseases, The University of Texas M. D. Anderson Cancer Center, Houston, Texas, 1/1988-1/1998

Research Investigator, Department of Infectious Diseases, Infectious Diseases, The University of Texas M. D. Anderson Cancer Center, Houston, Texas, 1/1998-1/2001

Assistant Professor, Department of Infectious Diseases, Infection Control and Employee Health, Infectious Diseases, The University of Texas M. D. Anderson Cancer Center, Houston, Texas, 7/2001-present

Administrative Appointments/Responsibilities

Member, Middle East Task Force, Houston, 2002-2007

Member, Clinical Research Committee, Houston, 2003-2006

Member, Ad Hoc Committee of the Infection Control Subcommittee for the Prevention of Fungal Infections, Houston, 2003-2007

Member, Institutional Research Grant (IRG) Committee, Houston, 2005-2007

Member, Institutional Review Board, Houston, 2006

Chairman, Division of Internal Medicine Research Committee, Houston, 2007

Member, Division of Internal Medicine Grand Round Planning Committee, Houston, 2007

Member, Steering Committee for Sister Institution between M.D. Anderson Cancer Center and American University of Beirut, Houston, 2007

Other Appointments/Responsibilities

Coordinator, ID/BMT Task Force for Collaborative Research, The University of Texas M. D. Anderson Cancer Center, Houston, 2004-2007

Coordinator, ID/Leukemia Task Force for Collaborative Research, The University of Texas M. D. Anderson Cancer Center, Houston, 2005-2007

Endowed Positions

N/A

Consultantships

N/A

Military or Other Governmental Service

N/A

Institutional Committee Activities

N/A

HONORS AND AWARDS

AICHE

Dean's High Honor List

Golden Key National Honor Society

Omega Chi Epsilon of Chemical Engineering

Tau Beta Pi

RESEARCH

Grants and Contracts

Funded

Principal Investigator-MDACC, Novel Detection Method Performed on Serum for the Diagnosis of Invasive Fungal Infection in Cancer Patients, LS2003-00009622, Mercy and Company, 2003-2004, \$12,500

Principal Investigator-MDACC, The Role of Aerosolized Agents in Combination with EDTA in Preventing Invasive Pulmonary Aspergillosis (IPA) in Murine Model, LS2003-00009173LE, Enzon, Inc., 2003-2005, \$89,750

Principal Investigator-MDACC, Activity of Antibiotics Against Gram Positive Organisms Embedded in Biofilm, LAB04-0555, Unknown, \$28,000

Principal Investigator-MDACC, Clinical Experience with Tigecycline in Cancer Patients, 3074A1-6000, Wyeth, \$47,770

Principal Investigator-MDACC, In Vitro Activity of Antifungals Against Candida Species Embedded in Biofilm, Unknown, \$41,000

Principal Investigator-MDACC, Retrospective Chart Review to Evaluate the Hepatic Safety Profile of Concomitant Use of Caspofungin and Cyclosporin A, CR02-635, Unknown, \$48,000

Principal Investigator-MDACC, Safety of Linezolid in Bone Marrow Transplant Patients, RCR02-734, Pfizer Pharmaceutical, \$50,000

Pending

Principal Investigator-MDACC, Methicillin-Resistant Staphylococcus Aureus Pneumonia in Cancer Patients: A 6 Year Experience at a Major Cancer Center, Pfizer Pharmaceutical, \$50,000

Other

N/A

Completed

N/A

Not Funded

N/A

Protocols**Funded**

Co-Principal Investigator, Randomized trial comparing imipenem-cilastatin and cefepime as initial therapy for fever in neutropenic patients, DM94-065, 1994-present

Co-Principal Investigator, Open study of Synercid (quinupristin/dalfopristin, RP59500) for emergency use (infections due to resistant bacteria, treatment failure or in treatment-intolerant patients), DM96-158, 1996-present

Co-Principal Investigator, A multicenter, double-blind, randomized, comparative study to evaluate the safety, tolerability, efficacy of pneumocandin (MK-0991) vs. Amphotericin B in the treatment of invasive candidiasis, DM97-302, 1997-present

Co-Principal Investigator, A randomized, open label, comparative, multicenter trial of voriconazole vs. Ambisome for empirical antifungal therapy in immunocompromised patients with persistent fever and neutropenia, DM97-304, 1997-present

Co-Principal Investigator, An open label, non-comparative, multicenter, phase III trial of the efficacy, safety and toleration of voriconazole in the primary or secondary treatment of invasive fungal infections., DM97-306, 1997-present

Co-Principal Investigator, Open label, randomized, multicenter, phase III study of intravenous Synercid 7.5 mg/kg every 8 hours vs. Vancomycin or Nafcillin in the treatment of 380 patients with central venous catheter-related infection, DM97-305, 1997-present

Co-Principal Investigator, A multicenter, open, non-comparative study to estimate the safety, tolerability, and efficacy of pneumocandin (MD-0991) in the treatment of invasive Aspergillus infections in adults who are refractory to or intolerant of Amphotericin B, lipid formulations of Amphotericin B, or azoles, DM98-103, 1998-present

Co-Principal Investigator, Central Venous Catheter and Blood Stream Infection in High-dose Bolus Interleukin-2 Treated Patients with Melanoma and Renal cell Carcinoma, RCR06-0098, 1998-present

Co-Principal Investigator, Efficacy of long-term silicone central venous catheters impregnated with rifampin and minocycline (ICRM) for preventing catheter-related infections: a prospective, randomized study, DM98-134, 1998-present

Co-Principal Investigator, Linezolid (PNU-100766) given intravenous or orally for compassionate use in patients with significant, multi-drug resistant gram positive infections, DM98-173, 1998-present

Co-Principal Investigator, Efficacy of hemodialysis central venous catheters impregnated with rifampin and minocycline (ICRM) for preventing catheter-related infections: a prospective, randomized study, DM99-278, 1999-present

Co-Principal Investigator, Linezolid in the eradication of fecal carriage of vancomycin-resistant enterococci (VRE) in adult patients, MD27-299, 1999-present

Co-Principal Investigator, Open Label Treatment Protocol for the Safety and Efficacy of SCH 56592 in the Treatment of Invasive Fungal Infections, DM99-134, 1999-present

Co-Principal Investigator, Phase III Randomized, Double-Blind (Double Dummy) Study of SCH 56592 vs. Fluconazole in the prophylaxis of Invasive Fungal Infections in High-Risk Recipients of Allogeneic Progenitor Cell Transplantation with Graft-Versus-Host-Disease, DM99-023, 1999-present

Co-Principal Investigator, Prospective Randomized Study Comparing Synercid vs. Zyvox in the Treatment of Vancomycin-Resistant Enterococcal Infections, DM99-294, 1999-present

Co-Principal Investigator, Phase II Study of Safety, Tolerance, Efficacy, Pharmacokinetics of Posaconazole (SCH 56592) for the Treatment of Invasive Fungal Infections in Immunocompromised Hosts, DM00-380, 2000-present

Co-Principal Investigator, A Retrospective Study to Establish a Historical Database on the Efficacy of Standard Antifungal Therapy in Patients with Invasive Fungal Infections, RCR01-581, 2001-present

Co-Principal Investigator, Non-Invasive Molecular Methods Performed on Serum for the Diagnosis of, LAB01-611, 2001-present

Co-Principal Investigator, Open-Label, Limited Access Protocol of Posaconazole (SCH 56592) in Invasive Fungal Infections, DM01-536, 2001-present

Co-Principal Investigator, Phase II, Randomized, Open-Label, Multi-center Study to Evaluate the Safety and Efficacy of Dalbavancin versus Vancomycin in the Treatment of Catheter-related Bloodstream Infections with Suspected or Confirmed Gram-Positive Bacterial Pathogens, ID01-687, 2001-present

Co-Principal Investigator, An Open Label Non-Comparative Study of the Safety and Efficacy of Intravenous Anidulafungin Plus Ambisome® As A Treatment for Invasive Aspergillosis, CS2002-000064865M, 2002-2005, \$393,049

Co-Principal Investigator, The Role of Antifungal in the Treatment of Invasive Aspergillosis (IA) in Patients, SR2002 – 00007404HM, 2002-2006, \$99,120

Principal Investigator, Novel Detection Method Performed on Serum for the Diagnosis of Invasive, LAB02-733, 2002-present

Co-Principal Investigator, Piperacillin/Tazobactam Vs. Cefepime in the Treatment of High Risk Febrile Neutropenic Cancer Patients, ID02-182, 2002-present

Principal Investigator, Retrospective Chart Review to Evaluate the Hepatic Safety Profile of Concomitant Use of Caspofungin and Cyclosporin A, RCR02-635, 2002-present

Co-Principal Investigator, A Randomized Controlled Trial of Posaconazole (SCH 56592) Vs. Standard Azole Therapy for the Prevention of Invasive Fungal Infections Among High-Risk Neutropenic Patients, CS2002 – 00007652DH, 2004-2005, \$72,164

Principal Investigator, Activity of Antibiotics Against Gram Positive Organisms Embedded in Biofilm, LS2004-000011611CG, 2004-2005, \$28,750

Co-Principal Investigator, The Impact of Vitamin B6 in Preventing the Hematologic Toxicites of Linezolid in Cancer Patients, CS2005-00014312PL, 2004-2005, \$8,714,500

Principal Investigator, Safety of Linezolid in Bone Marrow Transplant Patients, CS2004-00011747DH, 2005-2006, \$5,000,000

Co-Principal Investigator, The Impact of Vitamin B6 in Preventing the Hematologic Toxicites of Linezolid in Cancer Patients, 2005-0621, 2005-2006, \$89,145, Pfizer

Collaborator, Exchange of Antimicrobial Coated Catheters in the Management of Catheter-Related Bacteremia: A Prospective Randomized Trial, 2005-0734, 2005-present

Co-Chairman, Phase II, Open-Label Study to Evaluate the Safety and Efficacy of Daptomycin in the Treatment of Catheter-Related Staphylococcus aureus Bloodstream Infections, 2005-0622, 2005-present, Cubist Pharmaceuticals

Co-Chair, The Role of Posaconazole Salvage Therapy Compared to Amphotericin B Lipid Formulation (AMB/LPD) in Combination with Either Itraconazole or Caspofungin in the Treatment of Invasive Aspergillosis (IA) in Patients with Leukemia and Bone Marrow Transplant, RCR05-0057, 2005-present

Principal Investigator, Clinical Experience with Tigecycline in Cancer Patients, RCR06-0359, 2006-present, Wyeth

Principal Investigator, Methicillin Resistant Staphylococcus Aureus (MRSA) Pneumonia in Cancer Patients: A 6 Year Experience Study with specific evaluation of MRSA minimal inhibitory concentration, DR07-0325, 2007-present, Pfizer

Unfunded

Co-Principal Investigator, Candidemia in cancer patients: a retrospective review, RCR02-536, 2002-2004

Co-Principal Investigator, Susceptibility Patterns of Vancomycin-Resistant Enterococci (VRE) to Quinupristin/Dalfopristin (QD) and Linezolid (LZD) Before and After Clinical Use, RCR03-0244, 2003-present

Principal Investigator, In Vitro Activity of Antifungals Against Candida Species Embedded in Biofilm, LAB04-0587, 2004-present

Co-Principal Investigator, Vancomycin Resistant Enterococcus (VRE) Faecium vs VRE Fecalis, RCR04-0860, 2004-present

Collaborator, Exchange of Antimicrobial Coated Catheters in the Management of Catheter-Related Bacteremia: A Prospective Randomized Trial, 2005-0734, 2005-present

Co-Principal Investigator, Staphylococcus Aureus Bacteremia in Cancer Patients. Risk Factors for Complications and Outcome, RCR05-0059, 2005-present

Co-Principal Investigator, Central Venous Catheter and Blood Stream Infection in High-dose Bolus Interleukin-2

Treated Patients with Melanoma and Renal cell Carcinoma, RCR06-0098, 2006-present

Principal Investigator, Testing the Efficacy of Antimicrobial Vascular Catheters Placed Subcutaneously in a Rabbit Model, 10-05-12361, 2006-present

Co-Principal Investigator, The Role of Antiseptic Surface Coating to Reduce Urinary Tract Infection in the Chronically Catheterized Rabbit Model, 05-05-04461, 2006-present

Principal Investigator, The Safety of the Combination of Citrate or EDTA with Minocycline or Tigecycline and Ethanol When Used as an Antimicrobial Lock Solution in the Jugular Vein in the Rabbit Model, 02-06-03261, 2006-present

Co-Principal Investigator, Efficacy of Gendine-Coated Implants in Preventing Infection of Tibial Fractures in a Rabbit Model, 06-07-06761, 2007-present

Patents and Technology Licenses

Patents

N/A, Issam Raad, Robert Sherertz, Ray Hachem. EDTA and Other Chelators With or Without Antifungal Antimicrobial Agents for the Prevention and Treatment of Fungal Infections, United States, 09/139,522, 8/25/1998-12/26/2000, Filed

N/A, Issam Raad, Robert Sherertz, Ray Hachem. EDTA and Other Chelators With or Without Antifungal Antimicrobial Agents for the Prevention and Treatment of Fungal Infections, United States, 09/680,061, 10/4/2000-1/21/2003, Filed

Technology Licenses

N/A

Grant Reviewer/Service on Study Sections

N/A

PUBLICATIONS

Articles in Peer-Reviewed Journals

1. Reuben, A, Anaissie E, Nelson PE, Hachem R, Legrand C, Ho DH, Bodey GP. Antifungal susceptibility of 44 clinical isolates of *Fusarium* species determined by using a broth micro dilution method. *Antimicrob Agents Chemother* 33:1647-1649, 1989
2. Ro J, Lee D, Legrand C, Anaissie E, Hachem R, Ayala A. *Fusarium* infection - experimental model. *Mod Pathol* 3, 1990
3. Legrand, C, Anaissie E, Hachem R, Nelson P, Bodey GP, Ro J. Experimental fusarial hyalohyphomycosis in a murine model. *J Infect Dis.* 164:944-948, 1991
4. Anaissie EJ, Hachem R, Legrand C, Legenne P, Nelson P, Bodey GP. Lack of activity of amphotericin B in systemic murine fusarial infection. *J Infect Dis* 165:1155-7, 6/1992
5. Anaissie E, Gokaslan A, Hachem R, Rubin R, Griffin G, Robinson R, Sobel J, Bodey G. Azole therapy for trichosporonosis: clinical evaluation of eight patients, experimental therapy for murine infection, and review. *Clin Infect Dis* 15:781-7, 11/1992
6. Anaissie E, Hachem R, KTin-U C, Stephens LC, Bodey GP. Experimental hematogenous candidiasis caused by *Candida krusei* and *Candida albicans*: species differences in pathogenicity. *Infect Immun* 61:1268-71, 4/1993
7. Karyotakis NC, Anaissie EJ, Hachem R, Dignani MC, Samonis G. Comparison of the efficacy of polyenes and triazoles against hematogenous *Candida krusei* infection in neutropenic mice. *J Infect Dis* 168:1311-3, 11/1993
8. Anaissie EJ, Karyotakis NC, Hachem R, Dignani MC, Rex JH, Paetznick V. Correlation between in vitro and in vivo activity of antifungal agents against *Candida* species. *J Infect Dis* 170:384-9, 8/1994
9. Anaissie EJ, Hachem R, Karyotakis NC, Gokaslan A, Dignani MC, Stephens LC, Tin UCK. Comparative efficacies of amphotericin B, triazoles, and combination of both as experimental therapy for murine trichosporonosis. *Antimicrob Agents Chemother* 38:2541-4, 11/1994
10. Karyotakis NC, Dignani MC, Hachem R, Anaissie EJ. Activities of D0870, a novel triazole, against *Candida lusitaniae* and *Trichosporon beigelii* in experimental murine infections. *Antimicrob Agents Chemother* 39:571-3, 2/1995
11. Raad I, Hachem R. Treatment of central venous catheter-related fungemia due to *Fusarium oxysporum*. *Clin Infect Dis* 20:709-11, 3/1995
12. Raad I, Darouiche R, Hachem R, Sacilowski M, Bodey GP. Antibiotics and prevention of microbial colonization of catheters. *Antimicrob Agents Chemother* 39:2397-400, 11/1995

13. Raad I, Hachem R, Zermenio A, Stephens LC, Bodey GP. Silver iontophoretic catheter: a prototype of a long-term antiinfective vascular access device. *J Infect Dis* 173:495-8, 2/1996
14. Raad I, Darouiche R, Hachem R, Mansouri M, Bodey GP. The broad-spectrum activity and efficacy of catheters coated with minocycline and rifampin. *J Infect Dis* 173:418-24, 2/1996
15. Raad I, Hachem R, Leeds N, Sawaya R, Salem Z, Atweh S. Use of adjunctive treatment with interferon-gamma in an immunocompromised patient who had refractory multidrug-resistant tuberculosis of the brain. *Clin Infect Dis* 22:572-4, 3/1996
16. Raad, II, Whimbey EE, Rolston KV, Abi-Said D, Hachem RY, Pandya RG, Ghaddar HM, Karl CL, Bodey GP. A comparison of aztreonam plus vancomycin and imipenem plus vancomycin as initial therapy for febrile neutropenic cancer patients. *Cancer* 77:1386-94, 4/1996
17. Raad I, Hachem R, Zermenio A, Dumo M, Bodey GP. In vitro antimicrobial efficacy of silver iontophoretic catheter. *Biomaterials* 17:1055-9, 6/1996
18. Hachem R, Raad I, Rolston KV, Whimbey E, Katz R, Tarrand J, Libshitz H. Cutaneous and pulmonary infections caused by *Mycobacterium vaccae*. *Clin Infect Dis* 23:173-5, 7/1996
19. Raad I, Buzaid A, Rhyne J, Hachem R, Darouiche R, Safar H, Albitar M, Sherertz RJ. Minocycline and ethylenediaminetetraacetate for the prevention of recurrent vascular catheter infections. *Clin Infect Dis* 25:149-51, 7/1997
20. Raad I, Darouiche R, Dupuis J, Abi-Said D, Gabrielli A, Hachem R, Wall M, Harris R, Jones J, Buzaid A, Robertson C, Shenaq S, Curling P, Burke T, Ericsson C. Central venous catheters coated with minocycline and rifampin for the prevention of catheter-related colonization and bloodstream infections. A randomized, double-blind trial. The Texas Medical Center Catheter Study Group. *Ann Intern Med* 127:267-74, 8/1997
21. Raad, II, Hachem RY, Abi-Said D, Rolston KV, Whimbey E, Buzaid AC, Legha S. A prospective crossover randomized trial of novobiocin and rifampin prophylaxis for the prevention of intravascular catheter infections in cancer patients treated with interleukin-2. *Cancer* 82:403-11, 1/1998
22. Raad, II, Darouiche RO, Hachem R, Abi-Said D, Safar H, Darnule T, Mansouri M, Morck D. Antimicrobial durability and rare ultrastructural colonization of indwelling central catheters coated with minocycline and rifampin. *Crit Care Med* 26:219-24, 2/1998
23. Hachem, RY, Raad I. Clinical presentation and management of methicillin-resistant *Staphylococcus epidermidis* (MRSE) bloodstream infections. *Antibiotics for Clinicians* 2:21-24, 1998
24. Darouiche RO, Raad, II, Heard SO, Thornby JI, Wenker OC, Gabrielli A, Berg J, Khaderi N, Hanna H, Hachem R, Harris RL, Mayhall G. A comparison of two antimicrobial-impregnated central venous catheters. Catheter Study Group. *N Engl J Med* 340:1-8, 1/1999
25. Raad I, Bompard F, Hachem R. Prospective, randomized dose-ranging open phase II pilot study of quinupristin/dalfopristin versus vancomycin in the treatment of catheter-related staphylococcal bacteraemia. *Eur J Clin Microbiol Infect Dis* 18:199-202, 3/1999
26. Hanna, H, Abbas J, Bodey G, Mardani M, Girgawy E, Abi-Said D, Hachem R, Raad I. Candida krusei Fungemia (CKF): An Escalating Serious Infection in Immunocompromised Patients (Pts). . Proceedings of the 9th Annual Meeting of the Society for Healthcare Epidemiology of America (SHEA), San Francisco, CA,, 4/1999
27. Abbas J, Bodey GP, Hanna HA, Mardani M, Girgawy E, Abi-Said D, Whimbey E, Hachem R, Raad I. Candida krusei fungemia. An escalating serious infection in immunocompromised patients. *Arch Intern Med* 160:2659-64, 9/2000
28. Torres, HA, Hanna HA, Graviss L, Chaiban G, Hachem R, Chemaly RF, Girgawy E, Raad II. Chest tube related multidrug-resistant *Staphylococcus aureus* empyema: could the chest tube be coated with antiseptics? . *Infect Control Hosp Epidemiol*, 2000
29. Hachem, R, Sumoza D, Hanna H, Girgawy E, Munsell M, Raad I. Clinical and Radiologic Predictors of Invasive Pulmonary Aspergillosis in Cancer Patients: Should the EORTC/MSG Criteria be Revised? . *Cancer*, 2000
30. Hachem, RY, Afif C, Cooksley C, Boktour M, Chatzinikolaou I, Khan A, Kontoyiannis D, Rolston KV, Raad II. Invasive aspergillosis (IA) In patients with leukemia and bone marrow transplant patients (pts): poor outcome despite aggressive therapy (abstract no. 3815). *Blood* 96:36b, 2000
31. Minari A, Hachem R, Raad I. *Candida lusitaniae*: a cause of breakthrough fungemia in cancer patients. *Clin Infect Dis* 32:186-90, 1/2001
32. Raad I, Hachem R, Hanna H, Abi-Said D, Bivins C, Walsh G, Thornby J, Whimbey E, Huaringa A, Sukumaran A. Treatment of nosocomial postoperative pneumonia in cancer patients: a prospective randomized study. *Ann Surg Oncol* 8:179-86, 3/2001

33. Hachem R, Afif C, Gokaslan Z, Raad I. Successful treatment of vancomycin-resistant Enterococcus meningitis with linezolid. *Eur J Clin Microbiol Infect Dis* 20:432-4, 6/2001
34. Kontoyiannis DP, Vaziri I, Hanna HA, Boktour M, Thornby J, Hachem R, Bodey GP, Raad,, II. Risk Factors for Candida tropicalis fungemia in patients with cancer. *Clin Infect Dis* 33:1676-81, 11/2001
35. Raad I, Hachem R, Hanna H, Girgawy E, Rolston K, Whimbey E, Husni R, Bodey G. Treatment of vancomycin-resistant enterococcal infections in the immunocompromised host: quinupristin-dalfopristin in combination with minocycline. *Antimicrob Agents Chemother* 45:3202-4, 11/2001
36. Raad I, Hachem R, Tcholakian RK, Sherertz R. Efficacy of minocycline and EDTA lock solution in preventing catheter-related bacteremia, septic phlebitis, and endocarditis in rabbits. *Antimicrob Agents Chemother* 46:327-32, 2/2002
37. Husni R, Hachem R, Hanna H, Raad I. Risk factors for vancomycin-resistant Enterococcus (VRE) infection in colonized patients with cancer. *Infect Control Hosp Epidemiol* 23:102-3, 2/2002
38. Raad I, Hanna H, Huaranga A, Sumoza D, Hachem R, Albitar M. Diagnosis of invasive pulmonary aspergillosis using polymerase chain reaction-based detection of aspergillus in BAL. *Chest* 121:1171-6, 4/2002
39. Bodey GP, Mardani M, Hanna HA, Boktour M, Abbas J, Girgawy E, Hachem RY, Kontoyiannis DP, Raad,, II. The epidemiology of Candida glabrata and Candida albicans fungemia in immunocompromised patients with cancer. *Am J Med* 112:380-5, 4/2002
40. Raad I, Tarrand J, Hanna H, Albitar M, Janssen E, Boktour M, Bodey G, Mardani M, Hachem R, Kontoyiannis D, Whimbey E, Rolston K. Epidemiology, molecular mycology, and environmental sources of Fusarium infection in patients with cancer. *Infect Control Hosp Epidemiol* 23:532-7, 9/2002
41. Hachem R, Raad I. Failure of oral antimicrobial agents in eradicating gastrointestinal colonization with vancomycin-resistant enterococci. *Infect Control Hosp Epidemiol* 23:43-4, 2002
42. Raad I, Hanna H, Osting C, Hachem R, Umphrey J, Tarrand J, Kantarjian H, Bodey GP. Masking of neutropenic patients on transport from hospital rooms is associated with a decrease in nosocomial aspergillosis during construction. *Infect Control Hosp Epidemiol* 23:41-3, 2002
43. Hachem R, Raad I. Prevention and management of long-term catheter related infections in cancer patients. *Cancer Invest* 20:1105-13, 2002
44. Torres HA, Rivero GA, Lewis RE, Hachem R, Raad,, II, Kontoyiannis DP. Aspergillosis caused by non-fumigatus Aspergillus species: risk factors and in vitro susceptibility compared with Aspergillus fumigatus. *Diagn Microbiol Infect Dis* 46:25-8, 5/2003
45. Kontoyiannis DP, Hachem R, Lewis RE, Rivero GA, Torres HA, Thornby J, Champlin R, Kantarjian H, Bodey GP, Raad,, II. Efficacy and toxicity of caspofungin in combination with liposomal amphotericin B as primary or salvage treatment of invasive aspergillosis in patients with hematologic malignancies. *Cancer* 98:292-9, 7/2003
46. Hachem RY, Hicks K, Huen A, Raad I. Myelosuppression and serotonin syndrome associated with concurrent use of linezolid and selective serotonin reuptake inhibitors in bone marrow transplant recipients. *Clin Infect Dis* 37:e8-11, 7/2003
47. Hachem RY, Wright KC, Zermenio A, Bodey GP, Raad,, II. Evaluation of the silver iontophoretic catheter in an animal model. *Biomaterials* 24:3619-22, 9/2003
48. Raad,, II, Escalante C, Hachem RY, Hanna HA, Husni R, Afif C, Boktour MR, Whimbey EE, Kontoyiannis D, Jacobson K, Kantarjian H, Levett LM, Rolston KV. Treatment of febrile neutropenic patients with cancer who require hospitalization: a prospective randomized study comparing imipenem and ceftazidime. *Cancer* 98:1039-47, 9/2003
49. Raad I, Chatzinikolaou I, Chaiban G, Hanna H, Hachem R, Dvorak T, Cook G, Costerton W. In vitro and ex vivo activities of minocycline and EDTA against microorganisms embedded in biofilm on catheter surfaces. *Antimicrob Agents Chemother* 47:3580-5, 11/2003
50. Hadi U, Bitar M, Hachem R, Saade R, Husni R, Raad I. Fungal sinusitis in the immunocompetent patient: risk factors and surgical management. *Surg Infect (Larchmt)* 4:199-204, 2003
51. Chatzinikolaou I, Zipf TF, Hanna H, Umphrey J, Roberts WM, Sherertz R, Hachem R, Raad I. Minocycline-ethylenediaminetetraacetate lock solution for the prevention of implantable port infections in children with cancer. *Clin Infect Dis* 36:116-9, 2003
52. Raad I, Hanna H, Boktour M, Girgawy E, Danawi H, Mardani M, Kontoyiannis D, Darouiche R, Hachem R, Bodey GP. Management of central venous catheters in patients with cancer and candidemia. *Clin Infect Dis* 38:1119-27, 4/2004

53. Raad I, Hachem R, Hanna H, Afif C, Escalante C, Kantarjian H, Rolston K. Prospective, randomized study comparing quinupristin-dalfopristin with linezolid in the treatment of vancomycin-resistant Enterococcus faecium infections. *J Antimicrob Chemother* 53:646-9, 4/2004
54. Hachem R, Graviss L, Hanna H, Arbuckle R, Dvorak T, Hackett B, Gonzalez V, Perego C, Tarrand J, Raad I. Impact of surveillance for vancomycin-resistant enterococci on controlling a bloodstream outbreak among patients with hematologic malignancy. *Infect Control Hosp Epidemiol* 25:391-4, 5/2004
55. Raad I, Hachem R, Hanna H. Relationship between myalgias/arthritis occurring in patients receiving quinupristin/dalfopristin and biliary dysfunction. *J Antimicrob Chemother* 53:1105-8, 6/2004
56. Hanna H, Afif C, Alakech B, Boktour M, Tarrand J, Hachem R, Raad I. Central venous catheter-related bacteremia due to gram-negative bacilli: significance of catheter removal in preventing relapse. *Infect Control Hosp Epidemiol* 25:646-9, 8/2004
57. Raad,, II, Hanna HA, Hachem RY, Dvorak T, Arbuckle RB, Chaiban G, Rice LB. Clinical-use-associated decrease in susceptibility of vancomycin-resistant Enterococcus faecium to linezolid: a comparison with quinupristin-dalfopristin. *Antimicrob Agents Chemother* 48:3583-5, 9/2004
58. Marr KA, Hachem R, Papanicolaou G, Soman J, Arduino JM, Lipka CJ, Ngai AL, Kartsonis N, Chodakewitz J, Sable C. Retrospective study of the hepatic safety profile of patients concomitantly treated with caspofungin and cyclosporin A. *Transpl Infect Dis* 6:110-6, 9/2004
59. Hachem RY, Kontoyiannis DP, Boktour MR, Afif C, Cooksley C, Bodey GP, Chatzinikolaou I, Perego C, Kantarjian HM, Raad,, II. Aspergillus terreus: an emerging amphotericin B-resistant opportunistic mold in patients with hematologic malignancies. *Cancer* 101:1594-600, 10/2004
60. Boktour MR, Kontoyiannis DP, Hanna HA, Hachem RY, Grgawy E, Bodey GP, Raad,, II. Multiple-species candidemia in patients with cancer. *Cancer* 101:1860-5, 10/2004
61. Chatzinikolaou I, Hanna H, Hachem R, Alakech B, Tarrand J, Raad I. Differential quantitative blood cultures for the diagnosis of catheter-related bloodstream infections associated with short- and long-term catheters: a prospective study. *Diagn Microbiol Infect Dis* 50:167-72, 11/2004
62. Ohmagari N, Raad,, II, Hachem R, Kontoyiannis DP. Invasive aspergillosis in patients with solid tumors. *Cancer* 101:2300-2, 11/2004
63. Safdar A, Hanna HA, Boktour M, Kontoyiannis DP, Hachem R, Lichtiger B, Freireich EJ, Raad,, II. Impact of high-dose granulocyte transfusions in patients with cancer with candidemia: retrospective case-control analysis of 491 episodes of Candida species bloodstream infections. *Cancer* 101:2859-65, 12/2004
64. Kontoyiannis DP, Bodey GP, Hanna H, Hachem R, Boktour M, Grgaway E, Mardani M, Raad,, II. Outcome determinants of fusariosis in a tertiary care cancer center: the impact of neutrophil recovery. *Leuk Lymphoma* 45:139-41, 2004
65. Kontoyiannis, DP, Hanna H, Hachem R, Boktour M, Grgaway E, Mardani M, Bodey G, Raad I. Risk factors of poor outcome of fusariosis in a tertiary care cancer center. *Leuk/ Lymphoma* 45:141-143, 2004
66. Kontoyiannis DP, Torres HA, Chagut M, Hachem R, Tarrand JJ, Bodey GP, Raad,, II. Trichosporonosis in a tertiary care cancer center: risk factors, changing spectrum and determinants of outcome. *Scand J Infect Dis* 36:564-9, 2004
67. Raad I, Darouiche R, Vazquez J, Lentnek A, Hachem R, Hanna H, Goldstein B, Henkel T, Seltzer E. Efficacy and safety of weekly dalbavancin therapy for catheter-related bloodstream infection caused by gram-positive pathogens. *Clin Infect Dis* 40:374-80, 2/2005
68. Kontoyiannis DP, Boktour M, Hanna H, Torres HA, Hachem R, Raad,, II. Itraconazole added to a lipid formulation of amphotericin B does not improve outcome of primary treatment of invasive aspergillosis. *Cancer* 103:2334-7, 6/2005
69. Raad,, II, Hanna HA, Boktour M, Jabbour N, Hachem RY, Darouiche RO. Catheter-related vancomycin-resistant Enterococcus faecium bacteremia: clinical and molecular epidemiology. *Infect Control Hosp Epidemiol* 26:658-61, 7/2005
70. Ohmagari N, Hanna H, Graviss L, Hackett B, Perego C, Gonzalez V, Dvorak T, Hogan H, Hachem R, Rolston K, Raad I. Risk factors for infections with multidrug-resistant *Pseudomonas aeruginosa* in patients with cancer. *Cancer* 104:205-12, 7/2005
71. Chemaly RF, Torres HA, Hachem RY, Nogueras GM, Aguilera EA, Younes A, Luna MA, Rodriguez G, Tarrand JJ, Raad,, II. Cytomegalovirus pneumonia in patients with lymphoma. *Cancer* 104:1213-20, 9/2005
72. Torres HA, Hachem RY, Chemaly RF, Kontoyiannis DP, Raad II. Posaconazole: a broad-spectrum triazole antifunga. *Lancet Infect Dis* 5:775-785, 2005

73. Hachem R, Sumoza D, Hanna H, Grgawy E, Munsell M, Raad I. Clinical and radiologic predictors of invasive pulmonary aspergillosis in cancer patients: should the European Organization for Research and Treatment of Cancer/Mycosis Study Group (EORTC/MSG) criteria be revised? *Cancer* 106:1581-6, 4/2006
74. Mikols CL, Yan L, Norris JY, Russell TD, Khalifah AP, Hachem RR, Chakinala MM, Yusen RD, Castro M, Kuo E, Patterson GA, Mohanakumar T, Trulock EP, Walter MJ. IL-12 p80 is an innate epithelial cell effector that mediates chronic allograft dysfunction. *Am J Respir Crit Care Med* 174:461-70, 8/2006
75. Hanna H, Bahna P, Reitzel R, Dvorak T, Chaiban G, Hachem R, Raad I. Comparative in vitro efficacies and antimicrobial durabilities of novel antimicrobial central venous catheters. *Antimicrob Agents Chemother* 50:3283-8, 10/2006
76. Hachem R, Bahna P, Hanna H, Stephens LC, Raad I. EDTA as an Adjunct Antifungal Agent for Invasive Pulmonary Aspergillosis in a rodent model. *Antimicrob Agents Chemother* 50:1823-1827, 2006
77. Ullman JA, Cornely AO, Burchardt A, Hachem R, Kontoyiannis DP, Topelt K, Courtney R, Wexler D, Krishna G, Martinho M, Corcoran G, Raad II. Pharmacokinetics, safety and efficacy of posaconazole in patients with persistent febrile neutropenia or with refractory invasive fungal infection. *Antimicrob Agents Chemother* 50:658-666, 2006
78. Raad II, Hachem RY, Herbrecht R, Graybill JR, Hare R, Corcoran G, Kontoyiannis DP. Posaconazole as Salvage Therapy for Invasive Fusariosis in Patients with Underlying Hematologic Malignancy and Other Conditions. *Clin Infect Dis* 42:1398-1403, 2006
79. Boktour M, Hanna H, Ansari S, Bahna P, Hachem R, Tarrand J, Rolston K, Safdar A, Raad I. The central venous catheter and *Stenotrophomonas maltophilia* bacteremia in cancer patients. *Cancer* 106:1967-1973, 2006
80. Ghanem GA, Boktour M, Warneke C, Pham-Williams T, Kassis C, Bahna P, Aboufaycal H, Hachem R, Raad I. Catheter-related *Staphylococcus aureus* bacteremia in cancer patients: high rate of complications with therapeutic implications. *Medicine (Baltimore)* 86:54-60, 1/2007
81. Raad I, Hanna H, Dvorak T, Chaiban G, Hachem R. Optimal antimicrobial catheter lock solution, using different combinations of minocycline, EDTA, and 25-percent ethanol, rapidly eradicates organisms embedded in biofilm. *Antimicrob Agents Chemother* 51:78-83, 1/2007
82. Walsh TJ, Raad I, Patterson TF, Chandrasekar P, Donowitz GR, Graybill R, Greene RE, Hachem R, Hadley S, Herbrecht R, Langston A, Louie A, Ribaud P, Segal BH, Stevens DA, van Burik JA, White CS, Corcoran G, Gogate J, Krishna G, Pedicone L, Hardalo C, Perfect JR. Treatment of invasive aspergillosis with posaconazole in patients who are refractory to or intolerant of conventional therapy: an externally controlled trial. *Clin Infect Dis* 44:2-12, 1/2007
83. Bahna P, Hanna H, Dvorak T, Hachem R, Raad I. Antiseptic effect of novel alcohol-free mouthwash: a convenient prophylactic alternative for high-risk patients. *Oral Oncol* 43:159-64, 2/2007
84. Bahna P, Dvorak T, Hanna H, Yasko AW, Hachem R, Raad I. Orthopaedic metal devices coated with a novel antiseptic dye for the prevention of bacterial infections. *Int J Antimicrob Agents*, 2/2007
85. Raad I, Hanna H, Jiang Y, Dvorak T, Teitzel R, Chaiban G, Sheretz R, Hachem R. Comparative Activity of Daptomycin, Linezolid and Tigecycline Against Catheter-Related Methicillin-resistant *Staphylococcus* Bacteremic Isolates Embedded in Biofilm. *Antimicrob Agents Chemother* 51:1656-60, 3/2007
86. Keutgen XM, Hachem RY, Jiang Y, Pham-Williams T, Tarrand JJ, Raad II. A Comparison of Galactomannan-ELISA and a Newly Developed Galactomannan-LATEX Test in the Serologic Diagnosis of Invasive Aspergillosis in Patients with Hematologic Malignancies. *Eur J Clin Microbiol Infect Dis*, 2007
87. Hachem RY, Chemaly RF, Ahmar CA, Jiang Y, Boktour MR, Rjaili GA, Bodey GP, Raad I. Colistin is effective in the treatment of multidrug-resistant *Pseudomonas aeruginosa* infections in cancer patients. *Antimicrob Agents Chemother*, 2007
88. Shukrallah B, Hanna H, Hachem R, Ghannam D, Chatzinikolaou, Raad I. Correlation between early clinical response after catheter removal and diagnosis of catheter-related bloodstream infection. *Diagn Microbiol Infect Dis* 58:453-457, 2007
89. Ghanem G, Hachem R, Jiang Y, Chemaly RF, Raad I. Outcome analysis and antimicrobial risk factors of vancomycin-resistant *Enterococcus faecalis* and *faecium* bacteremia in cancer patients. *Infect Control Hosp Epidemiol* 28:1054-1059, 2007
90. Ansari SR, Hanna H, Hachem R, Jiang Y, Rolston K, Raad I. Risk factors for infections with multidrug-resistant *Stenotrophomonas maltophilia* in patients with cancer. *Cancer* 2109:2615-2622, 2007
91. Lee L, Berkheiser M, Jiang Y, Hackett B, Hachem RY, Chemaly RF, Raad II. Risk of bioaerosol contamination with *Aspergillus* species before and after cleaning in rooms filtered with high-efficiency particulate air filter that house patients with hematologic malignancy. *Infect Control Hosp Epidemiol* 28:1066-1070, 2007

92. Raad I, Hachem R, Hanna H, Bahna P, Chatzinikolaou I, Fang X, Jiang Y, Chemaly RF, Rolston K. Sources and outcomes of bloodstream infections in cancer patients: the role of central venous catheters. *Eur J Clin Microbiol Infect Dis*, 2007
93. Hachem RY, Boktour MR, Hanna HA, Husni RN, Torres HA, Afif C, Kontoyiannis DP, Raad II. Amphotericin B Lipid Complex (ABLC) vs. Liposomal Amphotericin B (L-AMB) Monotherapy of Invasive Aspergillosis (IA) in Patients with Hematological Malignancy (HM). *Cancer*. In Press
94. Chemaly RF, Torres HA, Hachem RY, Kontoyiannis DP, Safdar A, and Raad II. Human Herpesvirus-6 DNAemia in Severely Immunosuppressed Adult Patients with Leukemia. *Haematological*. In Press

Invited Articles

N/A

Editorials

N/A

Other Articles

N/A

Abstracts

1. Anaissie, E, Hachem R, Rolston K, Bodey GP. New Spectrum of Fungal Infections in Patients with Cancer. Twenty-eighth Interscience Conference on Antimicrobial Agents and Chemotherapy, Los Angeles, CA., 1988.
2. Anaissie, E, Espinel-Ingroff A, Kerkering T, Elting L, Karl C, Hachem R, Ho K, Vartivarian S, Bodey GP. Standardization of antifungal susceptibility testing using micro dilution technique. American Society for Microbiology (ASM) Annual Meeting, New Orleans, Louisiana,, 5/1989.
3. Reuben, A, Anaissie E, Nelson P, Hachem R, Ho D. Susceptibility of Fusarium to Antifungals. American Society for Microbiology (ASM) Annual Meeting, New Orleans, Louisiana, , 5/1989.
4. Anaissie, E, Hachem R, Vartivarian S, Elting L, Bodey GP. In Vivo/in vitro correlation of yeast susceptibility testing for Amphotericin B (AmB) and 5 Flucytosine (5FC). Twenty-ninth Interscience Conference on Antimicrobial Agents and Chemotherapy, Houston, Texas,, 1989.
5. Anaissie, E, Legrand C, Hachem R, Nelson P, Bodey G. Recovery of Fusarium spp. (Fus. Spp.) from the bloodstream using a rabbit model of systemic fusariosis (Syst. Fus.). Ninetieth Meeting of the American Society of Microbiology, Anaheim, California.:p. 413, 5/1990.
6. Anaissie, E, Hachem R, Bodey G. Comparative activities of Fluconazole, Itraconazole, Saperconazole, SCH 39304 and Amphotericin B (AmB) against disseminated *F. solani* infection in mice. Thirtieth Interscience Conference on Antimicrobial Agents and Chemotherapy, Atlanta, Georgia.:p. 134, 10/1990.
7. Anaissie, E, Gokaslan A, Hachem R, Stephens C. Disseminated trichosporonosis: Novel murine model, and experimental and clinical therapy. Programs and Abstracts of the American Society for Microbiology, 92nd General Meeting, New Orleans, LA., 5/1992.
8. Anaissie, E, Hachem R, Bodey GP. A murine model of disseminated *Candida krusei* infection: low virulence, and efficacy of Amphotericin B and Fluconazole. Thirty-second Interscience Conference on Antimicrobial Agents and Chemotherapy, Anaheim, CA., 10/1992.
9. Anaissie, E, Hachem R, Karyotakis N. Comparative activities of Fluconazole, Amphotericin B and D0870 against disseminated Trichosporon beigelli infection in mice. . Thirty-second Interscience Conference on Antimicrobial Agents and Chemotherapy, Anaheim, CA., 10/1992.
10. Raad, I, Hachem R, Darouiche R, Bodey G. Efficacy of minocycline/rifampin (M/R) in preventing staphylococcal infections: in vitro and in vivo correlation (Abstract No. 758). . Proceedings of the Thirty-third Interscience Conference on Antimicrobials Agents and Chemotherapy (ICAAC), New Orleans, LA., 10/1993.
11. Raad, I, Hachem R, Legha S, Bodey G. Novobiocin (Nov) and Rifampin (Rif): oral prophylactic antibiotics to prevent staphylococcal infections in patients receiving Interleukin-2 (IL2). . Thirty-third Interscience Conference on Antimicrobial Agents and Chemotherapy, New Orleans, LA., 10/1993.
12. Raad, I, Hachem R, Sherertz R. Minocycline-EDTA (M-EDTA) flush solution for the prevention of vascular catheter infection. . Proceedings of the Thirty-fourth Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Orlando, FL, 10/1994.
13. Raad, I, Darouiche R, Hachem R, Bodey GP. The broad spectrum activity of catheters coated with minocycline and rifampin (M/R) against bacteria and fung. : Proceedings of the Thirty-fourth Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Orlando, FL, , 10/1994.
14. Raad, I, Sacilowski M, Hachem R, Bodey G. The activity of streptogramin RP59500 (RP) against methicillin

- sensitive and resistant Staphylococci. Proceedings of the Second International Conference on the Macrolides, Azolides and Streptogramins (ICMAS), Venice, Italy,, 1994.
15. Raad, I, Darouiche R, Hachem R. Central venous catheters (CVC) coated with minocycline and rifampin (M/R) for the prevention of catheter-related bacteremia (CRB). Proceedings of the 35th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), San Francisco, CA, 9/1995.
 16. Raad, I, Darouiche R, Abi-Said D, Harris R, Hachem R, Ericsson C. New Devices for the Prevention of Catheter-related Bacteremia. Proceedings of the Thirty-first Middle East Medical Assembly (MEMA), Beirut, Lebanon,, 5/1996.
 17. Raad, I, Abi-Said D, Whimbey E, Rolston K, Hachem R, Bodey GP. Treatment of Febrile Neutropenic Cancer Patients: Carbapenem versus Monobactam Antibiotics. Proceedings of the Thirty-first Middle East Medical Assembly (MEMA), Beirut, Lebanon,, 5/1996.
 18. Raad, I, Darouiche R, Hachem R, Safar H, Darnule T, Abi-Said D, Mansouri M, Morck D. Effect of anti-infective coatings on biofilms. Proceedings of the Surfaces in Biomaterials; 96 Symposium. Chandler, AZ,, 9/1996.
 19. Raad, I, Hachem R, Sherertz R. Efficacy of Minocycline/EDTA (M-EDTA) Flush in Preventing Catheter-related Bacteremia (CRB) and Septic Phlebitis (SP) in Rabbits. Proceedings of the 36th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC). New Orleans, LA,, 9/1996.
 20. Raad, I, Khan A, Abi-Said D, Whimbey E, Hachem R, Hill L. Intra-arterial Catheters For Cancer Chemotherapy (IACC): Low Infection Rate Associated with Aseptic Insertions. Proceedings of the 36th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC). New Orleans, LA,, 9/1996.
 21. Raad, I, Sumoza D, Huaranga A, Safar H, Hachem R, Dvorak T, Albitar M. Polymerase chain reaction (PCR) for the early diagnosis of invasive pulmonary aspergillosis (IPA) in cancer patients. Proceedings of the 37th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC). Toronto, Ontario,, 9/1997.
 22. Raad, I, Hanna H, Mendoza M, Hachem R, Alrahwan A, Abbas J, Umphrey J. Clonal outbreak of vancomycin-resistant Enterococcus faecium (VREF) in the Medical Intensive Care Unit (MICU) of a Cancer Center (CC). . Proceedings of the Eighth Annual Meeting of the Society for Healthcare Epidemiology of America, Orlando, Florida,, 4/1998.
 23. Raad, I, Hanna H, Richardson D, Abi-Said D, Awad A, Alrahwan A, Bivins C, Khan A, Mansour G, Hachem R. Optimal frequency of changing intravenous administration sets (IVAS): is it safe to prolong duration of use beyond 3 days (3D)? Proceedings of the Eighth Annual Meeting of the Society for Healthcare Epidemiology of America, Orlando, Florida,, 4/1998.
 24. Hachem R, Raad II. Are bacitracin and gentamicin useful in combination for the eradication of vancomycin-resistant Enterococcus (VRE) fecal carriage? Proceedings of the 38th Annual Meeting of the Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), San Diego, California,, 9/1998.
 25. Hanna, H, Husni R, Hachem R, Raad I. Vancomycin-resistant Enterococcus faecium (VREF): Risk Factors for Infection in Colonized Cancer Patients. Proceedings of the 9th Annual Meeting of the Society for Healthcare Epidemiology of America (SHEA), San Francisco, CA,, 4/1999.
 26. Mardani, M Hanna HA, Hachem RY, Abbas J, Girgawy E, Raad II. Candida glabrata versus Candida albicans fungemia in immunocompromised patients (pts): a matched pair analysis. Proceedings of the 39th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), San Francisco, CA,, 9/1999.
 27. Minari, AM, Hachem R, Raad I. Candida lusitaniae: An emerging cause of nosocomial breakthrough fungemia (BF) in cancer patients (pts). Proceedings of the 39th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), San Francisco, CA,, 9/1999.
 28. Husni, R, Hachem R, Afif C, Raad I. Linezolid treatment for vancomycin-resistant Enterococcus (VRE) infections in cancer patients. Proceedings of the 37th Annual Meeting of the Infectious Disease Society of America (IDSA), Philadelphia, PA,, 1999.
 29. Hachem, RY, Raad II, Afif CM, Negroni R, Graybill J, Hadley S, Kantarjian H, Adams S, Mukwaya G. An open, non-comparative multicenter to evaluate efficacy and safety of posaconazole (SCH 56592) in the treatment of invasive fungal infections (IFI) refractory (R) to or intolerant (I) to standard therapy (ST). Proceedings of the 40th Interscience conference on Antimicrobial Agents and Chemotherapy (ICAAC), pp. 372, Abstract #1109, Toronto, Ontario, Canada,, 9/2000.
 30. Raad, I, Huaranga A, Sumoza D, Hanna HA, Rolston KV, Kontoyiannis D, Hachem RY, Albitar M. Diagnosis of Invasive pulmonary aspergillosis (IPA) using polymerase chain reaction (PCR) based detection of Aspergillus in bronchoalveolar lavage (BAL). Proceedings of the 38th Annual Meeting of the Infectious Diseases Society of America, pp. 47, Abstract #40, New Orleans, LA,, 9/2000.
 31. Hanna, H, Alakech B, Chatzinikolaou I, Darouiche R, Rolston K, Whimbey E, Hachem R, Raad I. Predictors of catheter-related bloodstream Infections (CRBSI) in cancer patients with bacteremia or fungemia. Proceedings of

- the 38th Annual Meeting of the Infectious Diseases Society of America, pp. 112, Abstract #414, New Orleans, LA., 9/2000.
32. Kontoyiannis, DP, Vaziri I, Hanna H, Thornby J, Boktour M, Hachem R, Bodey GP, Raad II. Risk factors for *Candida tropicalis* fungemia in patients with cancer. Proceedings of the 40th Interscience conference on Antimicrobial Agents and Chemotherapy (ICAAC), pp. 360, Abstract #232, Toronto, Ontario, Canada,, 9/2000.
 33. Raad, I, Tarrand J, Hanna H, Boktour M, Mardani M, Hachem R, Rolston K. Epidemiology, molecular mycology and environmental sources of *Fusarium* infection in cancer patients. Proceedings of the 11th Annual Meeting of the Society for Healthcare Epidemiology (abstract no. 209) Toronto, Ontario,:pp. 84, 4/2001.
 34. Afif, C, Hanna HA, Alakech B, Boktour M, Tarrand J, Hachem R, Raad II. Central venous catheter-related gram negative bacteremia (CRGNB): significance of catheter removal in preventing relapse. Proceedings of the 39th Annual Meeting of the Infectious Diseases Society of America (abstract no.) San Francisco, California,, 10/2001.
 35. Raad, II, Escalante C, Hachem R, Hanna H, Afif C, Boktour M, Whimbey E, Kontoyiannis D, Jacobson K, Bodey G, Rolston K. Comparison between imipenem/cilastatin (I) and ceftazidime (C) as initial therapy for febrile neutropenic cancer patients (PTS) requiring hospitalization. Proceedings of the 39th Annual Meeting of the Infectious Diseases Society of America (abstract no.) San Francisco, California,, 10/2001.
 36. Bodey, GP, Boktour M, May S, Duvic M, Girgawy E, Kontoyiannis D, Hachem R, Raad I. Cutaneous manifestation of *Fusarium* infections. Proceedings of the 39th Annual Meeting of the Infectious Diseases Society of America (abstract no.637) San Francisco, California,, 10/2001.
 37. Hicks, K, Hachem RY, Huen A, Raad II. Myelosuppression and serotonin syndrome associated with linezolid and selective serotonin re-uptake inhibitors (SSRIS). Proceedings of the 39th Annual Meeting of the Infectious Diseases Society of America (abstract no.) San Francisco, California,, 10/2001.
 38. Kontoyiannis, DP, Hachem R, Lewis RE, Rivero G, Kantarjian H, Raad I. Efficacy and toxicity of the caspofungin/liposomal amphotericin B (CAS/LipoAMB) Combination in Documented or Possible Invasive Aspergillosis (IA) in Patients (Pts) with Hematologic Malignancies. Proceedings of the 42nd Annual Meeting of the Interscience Conference on Antimicrobial Agents and Chemotherapy (abstract #M-1820), San Diego, California,, 9/2002.
 39. Raad, I, Chatzinikolaou I, Chaiban G, Hanna H, Hachem R, Dvorak T. In vitro and ex vivo activity of minocycline and EDTA (M-EDTA) against microorganisms embedded in biofilm on catheters. Proceedings of the 42nd Annual Meeting of the Interscience Conference on Antimicrobial Agents and Chemotherapy (abstract #K-75), San Diego, California., 9/2002.
 40. Raad, I, Hanna H, Jabbour N, Boktour M, Dvorak T, Chaiban G, Hachem R. Molecular and clinical epidemiology of vancomycin-resistant enterococcal catheter-related bacteremia (VRE-CRI). Proceedings of the 42nd Annual Meeting of the Interscience Conference on Antimicrobial Agents and Chemotherapy (abstract #K-76), San Diego, California., 9/2002.
 41. Hachem, R, Wright KC, Zermeno A, Bodey GP, Raad II. Safety and long-term durability of the silver iontophoretic catheter in an animal model. Proceedings of the 42nd Annual Meeting of the Interscience Conference on Antimicrobial Agents and Chemotherapy (abstract #B-271), San Diego, California., 9/2002.
 42. Hanna, H, Graviss L, Chaiban G, Dvorak T, Arbuckle R, Estey E, Munsell M, Hachem R, Champlin R, Raad I. Susceptibility patterns of *Staphylococcus* organisms in leukemia and bone marrow transplant (BMT) services after the use of minocycline/rifampin-impregnated central venous catheters (MR-CVCs) in a cancer hospital. . Proceedings of the 42nd Annual Meeting of the Interscience Conference on Antimicrobial Agents and Chemotherapy (abstract #K-74), San Diego, California., 9/2002.
 43. Raad, I, Hanna HA, Arbuckle RB, Chaiban G, Dvorak, Hachem RY. Susceptibility patterns of vancomycin-resistant enterococci (VRE) to quinupristin/dalfopristin (QD) and linezolid (LZD) before and after clinical use. Proceedings of the 42nd Annual Meeting of the Interscience Conference on Antimicrobial Agents and Chemotherapy (abstract #E-1134), San Diego, California, , 9/2002.
 44. Hanna, H, Boktour M, Bodey G, Girgawy E, Kontoyiannis D, Hachem R, Raad I. *Candida parapsilosis* Fungemia (CPF) Responds Better to Antifungal Therapy than Fungemia Due to *Candida albicans* (CAF) in Immunocompromised Cancer Patients. Proceedings of the 40th Annual Meeting of the Infectious Diseases Society of America (abstract #349), Chicago, Illinois, , 10/2002.
 45. Hachem, R, Kontoyiannis D, Boktour M, Afif C, Cooksley C, Chatzinikolaou I, Raad I. Invasive Aspergillosis (IA) with *Aspergillus terreus* (AT) and *Aspergillus fumigatus* (AF): A Comparative Analysis of Risk Factors and Outcome in Cancer Patients. Proceedings of the 40th Annual Meeting of the Infectious Diseases Society of America (abstract #338), Chicago, Illinois,, 10/2002.
 46. Kontoyiannis, D, Hanna H, Hachem R, Boktour M, Girgawy E, Mardani M, Bodey G, Raad I. Risk Factors of Poor Outcome of Fusariosis in a Tertiary Care Cancer Center. Proceedings of the 40th Annual Meeting of the Infectious Diseases Society of America (abstract #396), Chicago, Illinois, 10/2002.

47. Chagua, MR, Hachem R, Raad I, Kontoyiannis D. Trichosporonosis in a Tertiary Care Cancer Center: Risk Factors, Spectrum and Determinants of Outcome. Proceedings of the 40th Annual Meeting of the Infectious Diseases Society of America (abstract #367), Chicago, Illinois,, 10/2002.
48. Raad, II, Chaiban G, Hanna HA, Dvorak T, Lewis R, Darouiche R, Hachem R. Activity of antibiotics against resistant gram positive organisms (RGPO) embedded in biofilm. Proceedings of the 43rd Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC) (abstract C-1118), Chicago, Illinois,, 9/2003.
49. Ezzet, F, Wexler D, Courtney R, Martinho M, Cellary A, Huber C, Hachem R, Kontoyiannis D, Topelt K, Corcoran G, Conely OA, Raad I, Ullman AJ. Comparative bioavailability of oral posaconazole (POS) in different dosage regimens: a population pharmacokinetic analysis. Proceedings of the 43rd Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC) (abstract #A1565), Chicago, Illinois,, 9/2003.
50. Ullmann, AJ, Conely GA, Burchardt A, Huber C, Hachem R, Kontoyiannis DP, Topelt K, Lahey J, Ezzet F, Courtney R, Corcoran G, Raad I, Courtney R, Corcoran G, Raad I. Safety and efficacy of posaconazole (POS) in a pharmacokinetic study in patients with febrile neutropenia (FN) or refractory invasive fungal infection (rIFI). . Proceedings of the 43rd Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC) (abstract #M-1257), Chicago, Illinois,, 9/2003.
51. Safdar, A, Hanna HA, Boktour M, Kontoyiannis DP, Hachem R, Raad II. Donor granulocyte transfusions in cancer patients with hematogenous candidiasis – Impact on fungemia outcome. Proceedings of the 43rd Interscience Conference on Antimicrobials Agents and Chemotherapy (ICAAC)(abstract M969), Chicago, Illinois,, 9/2003.
52. Raad, I, Hanna H, Chatzinikolaou I, Hachem R, Tarrand J. Is Clinical Response (CR) Following Catheter Removal Useful in Diagnosing Catheter-Related Bloodstream Infection (CRBSI)? Proceedings of the 43rd Interscience Conference on Antimicrobials Agents and Chemotherapy (ICAAC)(abstract #K-137), Chicago, Illinois., 9/2003.
53. Raad, II, Hachem RY, Hanna H, Rolston KVI. Myalgias/arthalgias (MA) occurring in patients receiving quinupristin/dalfopristin (QD) may be related to biliary dysfunction. Proceddings of the 43rd Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC) (abstract A522), Chicago, Illinois., 9/2003.
54. Grgawy, E, Hanna H, Graviss L, Chaiban G, Hachem R, Dvorak T, Chemaly R, Raad I. Chest tube (CT) related multidrug-resistant *Staphylococcus aureus* (MRSA) empyema: could the CT be coated with antiseptics? . Proceedings of the 41st Annual Meeting of the Infectious Diseases Society of America (abstract 389), San Diego, California,, 10/2003.
55. Hanna, H, Chatzinikolaou I, Alakech B, Hachem R, Lewis R, Kontoyiannis D, Tarrand J, Raad I. Differential positive quantitative blood cultures (DPQBC) and the diagnosis of catheter-related bloodstream infections (CRBSI). Proceedings of the 41st Annual Meeting of the Infectious Diseases Society of America (abstract #334), San Diego, California, 10/2003.
56. Hachem, R, Rice L, Hanna H, Dvorak T, Rolston K, Arbuckle R, Chaiban G, Raad I. Molecular patterns of decreased vancomycin-resistant *Enterococcus faecium* (VREF) susceptibility for linezolid (LZD) associated with clinical use. Proceedings of the 41st Annual Meeting of the Infectious Diseases Society of America (abstract 216), San Diego, California,, 10/2003.
57. Boktour, M, Hanna H, Kontoyiannis D, Hachem R, Grgawy E, Bodey G, Raad. Multiple species candidemia (MSC) in cancer patients: risk factors and response to antifungal therapy. Proceedings of the 41st Annual Meeting of the Infectious Diseases Society of America (abstract 391), San Diego, California., 10/2003.
58. Hachem, R, Graviss L, Arbuckle R, Hanna H, Dvorak T, Hackett B, Gonzalez V, Osting C, Tarrand J, Raad I. The impact of vancomycin-resistant enterococcal (VRE) stool surveillance (SS) in patients with hematologic malignancy (HM) on controlling outbreak bacteremias. Proceedings of the 41st Annual Meeting of the Infectious Diseases Society of America (abstract 379), San Diego, California., 10/2003.
59. Marr, K, Hachem R, Papanicolaou G, Soman J, Arduino JM, Lipka J, Ngai A, Chodakewitz J, Sable C. Retrospective Study of Concomitant Use of Caspofungin with Cyclosporin A (CsA) in Patients Treated During Marketed Use. Proceedings of the 45th Annual Meeting of the American Society of Hematology, San Diego, California, 12/2003.
60. Hachem, RY, Hogan HH, Coyle EA, Neuhauser MM, Garey K, Raad II. The Safety and Toxicity of Linezolid in Bone Marrow Transplant Patients. Proceedings of the 45th Annual Meeting of the American Society of Hematology (abstract #1694), San Diego, California, 12/2003.
61. Hachem, R, Graybill JR, Negroni R, Schiller K, Zakowski P, Pedicone L. Posaconazole as salvage therapy for Pse infections: a case series. 14th Congress of Clinical Microbiology and Infectious Diseases, Prague, Czech Republic, 5/2004.
62. Raad, II, Hanna HA, Boktour M, Jabbour N, Hachem RY, Darouiche RO. Catheter-Related Vancomycin-Resistant *Enterococcus faecium* Bacteremia: Clinical and Molecular Epidemiology. Proceedings of the 13th International Symposium on Infections in the Immunocompromised Host, Granada, Spain, 6/2004.

63. Torres, HA, Younes A, Aguilera EA, Rodriguez GH, Luna MA, Tarrand J, Hachem RY, Raad II, Chemaly RF. Cytomegalovirus Pneumonia in Patients with Lymphoma. Proceedings of the 13th International Symposium on Infections in the Immunocompromised Host, Granada, Spain,, 6/2004.
64. Raad, I, Hachem R, Herbrecht R, Hare RS, Corcoran G. Experience of Posaconazole in Patients with Fusariosis. Proceedings of the 13th International Symposium on Infections in the Immunocompromised Host, Granada, Spain,, 6/2004.
65. Raad, II, Boktour MR, Hanna HA, Kontoyiannis DP, Hachem RY. Caspofungin (CASPO) Amphotericin B Lipid Formulations (AmB/LPD) or the Combination as Salvage Therapy for Invasive Aspergillosis (IA) in Patients (pts) with Hematologic Malignancy (HM). . Proceedings of the 42nd Annual Meeting of the Infectious Diseases Society of America [Abstract 678], Boston, MA., 2004.
66. Raad, I, Boktour M, Hanna H, Kontoyiannis D, Hachem R. Posaconazole (POS) Compared to Amphotericin B Lipid Formulations (AmB/LPD) alone or in Combination with Itraconazole (IT) as Salvage Therapy for Invasive Aspergillosis (IA) in Patients (pts) with Hematologic Malignancy (HM)[Abstract M-1035]. . Proceedings of the 42nd Annual Meeting of the Infectious Diseases Society of America, Boston, MA, 2004.
67. Raad, II, Boktour MR, Hanna HA, Kontoyiannis DP, Hachem RY. Posaconazole (POS) Compared to Amphotericin B Lipid Formulations (AmB/LPD) in Combination with Caspofungin (CASP) as Salvage Therapy for Invasive Aspergillosis (IA) in Patients (pts) with Hematologic Malignancy (HM) [Abstract M-1035]. Proceedings of the 44th Annual Meeting of the Interscience Conference on Antimicrobial Agents and Chemotherapy, Washington, DC, 2, 2004, 2004.
68. Raad, II, Hachem RY, Boktour MR, Chemaly RF, Daugherty TC, Hanna HA. Real Time PCR (RT-PCR) and Galactomannan (GM) for the Diagnosis of Invasive Aspergillosis (IA) in Cancer Patients. Proceedings of the 42nd Annual Meeting of the Infectious Diseases Society of America [Abstract 620], Boston, MA,, 2004.
69. Raad, I, Graviss L, Chemaly R, Hanna H, Hachem R, Hulten K, Kaplan S. The Perils of Molecular Typing: Does a Clonal Cluster of Nosocomial MRSA Always Imply Nosocomial Transmission? Proceedings of the 44th Annual Meeting of the Interscience Conference on Antimicrobial Agents and Chemotherapy [Abstract K-70], Washington, DC,, 2004.
70. Chemaly, RF, Gonzalez VR, Hachem RY, Perego CA, Donato ML, Champlin RE, Neumann JL, Johnston PA, Raad II. Detection and Control of a Nosocomial Respiratory Syncytial Virus (RSV) Outbreak in an Adult Bone Marrow Transplant Unit: the Role of Palivizumab. : Proceedings of the 15th Annual Meeting of the Society for Healthcare Epidemiology of America [Abstract 126], Los Angeles, CA,, 4/2005.
71. Hachem, R, Lee LD, Berkheiser ML, Hackett B, Chemaly R, Perego, C, Kontoyiannis DP, Raad II. Nosocomial Invasive Aspergillosis (NIA) in Patients with Hematologic Maiognancy: is it Waterborne or Airborne? . Proceedings of the 15th Annual Meeting of the Society for Healthcare Epidemiology of America [Abstract 70], Los Angeles, CA., 4/2005.
72. Aguilera, EA, Torres, HA, Gonzalez VR, Raad II, Hachem RY, Frenzel EC, Thomas GA, Chemaly RF. The Impact of Influenza Epidemic with a Predominant Mismatched Circulating Strain with the Vaccine Strain on Patients with Hematologic Malignancies. Proceedings of the 15th Annual Meeting of the Society for Healthcare Epidemiology of America [Abstract 68], Los Angeles, CA,, 4/2005.
73. Lee, LD, Berkheiser ML, Hackett B, Hachem R, Chemaly R, Raad I1. The Risk of Bioaerosol Contamination with Aspergillus Species before and after Terminal Cleaning in Hepa-Filtered Rooms Housing Patients with Hematologic Malignancy (HM). Proceedings of the 15th Annual Meeting of the Society for Healthcare Epidemiology of America [Abstract 84], Los Angeles, CA., 4/2005.
74. Hachem, RY, Hanna HA, Dvorak T, Chemaly RF, Raad II. Activity of Daptomycin and Tigecycline Against Clinical Isolates Causing Catheter-Related Methicillin-Resistant Staphylococcus aureus (CR-MRSA) Embedded in Biofilm. Proceedings of the 45th Interscience Conference on Antimicrobial Agents and Chemotherapy [Abstract], New Orleans, LA,, 9/2005.
75. Hachem, RY, Hanna HA, Dvorak T, Kontoyiannis DP, Raad II. Antifungal activity of Amphotericin B Lipid Complex (ABLC) with EDTA Against Candida Embedded in Biofilm. Proceedings of the 45th Interscience Conference on Antimicrobial Agents and Chemotherapy [Abstract], New Orleans, LA,, 9/2005.
76. Hachem, R, Bahna P, Hanna H, Raad I. EDTA as an Adjunct Agent for the Treatment of Invasive Pulmonary Aspergillosis (IPA) in a Murine Model. Proceedings of the 45th Interscience Conference on Antimicrobial Agents and Chemotherapy [Abstract], New Orleans, LA,, 9/2005.
77. Bahna, BN, Hanna HA, Dvorak T, Chaiban G, Chemaly RF, Hachem RY, Raad II. Gendine coated orthopedic metal devices (OMDs) for the prevention of bacterial infection. Proceedings of the 45th Interscience Conference on Antimicrobial Agents and Chemotherapy [Abstract], New Orleans, LA,, 9/2005.
78. Chemaly, RF, Torres HA, Rohtgi N, Kontyiannis DP, Sepulveda C, Hachem R, Raad II. Human herpesviruses-6

(HHV-6) viremia is associated with donor granulocyte transfusions (GTX) in heavily immunosuppressed patients (PTS) with leukemia. Proceedings of the 45th Interscience Conference on Antimicrobial Agents and Chemotherapy (#V-592), New Orleans, LA,, 9/2005.

79. Raad, I, Hanna H, Dvorak T, Chaiban G, Hachem R. Optimal Antimicrobial Catheter Lock Solution and Rapid Eradication of Organisms Embedded in Biofilm. Proceedings of the 45th Interscience Conference on Antimicrobial Agents and Chemotherapy [Abstract], New Orleans, LA,, 9/2005.
80. Bahna, BN, Hanna HA, Chemaly RF, Hachem RY, Raad II. Sources and Outcome of Bloodstream Infections (BSI) in Cancer Patients (pts): The Role of Quantitative Blood Cultures (QBC) and the Central Venous Catheter (CVC). . Proceedings of the 45th Interscience Conference on Antimicrobial Agents and Chemotherapy [Abstract], New Orleans, LA,, 9/2005.
81. Hanna, H, Kontoyiannis D, Buddineni J, Boktour M, Antoniadou A, Hachem R, Raad I. The Changing Epidemiology of Candidemia in Hematologic Malignancy (HM): Candida krusei and Candida glabrata are the Leading Causes of Fungemia. Proceedings of the 45th Interscience Conference on Antimicrobial Agents and Chemotherapy [Abstract], New Orleans, LA,, 9/2005.
82. Hachem, RY, Boktour-MR, Hanna HA, Torres H, Afif C, Kontoyiannis D, Raad II. Amphotericin B Lipid Complex (ABLC) vs Liposomal Amphotericin B (L-AMB) Monotherapy of Invasive Aspergillosis (IA) in Patients with Hematological Malignancy (HM). Proceedings of the 43rd Annual Meeting of the Infectious Diseases Society of America [poster], San Francisco, CA, 10/2005.
83. Ghanem, GA, Boktour MR, Warneke C, Bahna BN, Kassis K, Chemaly RF, Hachem RY, Raad II. Catheter-related Staphylococcus aureus bacteremia (CRSAB) in cancer patients: high complication rate associated with type of malignancy. Proceedings of the 43rd Annual Meeting of the Infectious Diseases Society of America [Abstract], San Francisco, California, 10/2005.
84. Hachem, RY, Chemaly RF, Ahmar C, Boktour M, Abou Rjaili G, Weiss LT, Bodey GP, Raad II. Does Colistin Have a Role in the Treatment of Infections Caused by Multidrug-Resistant Pseudomonas aeruginosa (MDR-PSA) in Cancer Patients? . Proceedings of the 43rd Annual Meeting of the Infectious Diseases Society of America [poster], San Francisco, CA,, 10/2005.
85. Aboufaycal, H, Adachi J, Hachem R, Weiss LT, Kontoyiannis DP, Safdar A, Chemaly R, Rolston K, Raad I. Risk factors and outcome of infection with multidrug-resistant (MDR) Escherichia coli in patients with cancer. Proceedings of the 43rd Annual Meeting of the Infectious Diseases Society of America [Abstract], San Francisco, California (accepted for presentation),, 10/2005.
86. Ansari, SR, Weiss LT, Hachem RY, Hanna HA, Safdar A, Boktour M, Rolston KV, Raad II. Role of prior antibiotic use in emergence of multidrug-resistant (MDR) Stenotrophomonas maltophilia in cancer patients. Proceedings of the 43rd Annual Meeting of the Infectious Diseases Society of America [Abstract], San Francisco, California (accepted for presentation),, 10/2005.
87. Chemaly ,RF, Torres HA, Rohatgi N, Kontoyiannis DP, Safdar A, Kantarjian H, Daugherty T, Sepulveda C, Hachem R, Raad II. Human Herpesvirus-6 (HHV-6) Viremia is Assoiated with Donor Granulocyte Transfusions (gtx) in Heavily Immunosuppressed Patients (pts) with Leukemia. . The 45th Interscience Conference on Antimicrobial Agents and Chemotherapy [Abstract #], New Orleans, 2005.
88. Ansari, SR, Hanna HA, Hachem RY, Safdar A, Boktour M, Roslton KV, Raad II. Role of Prior Antibiotic Use in Emergence of Multidrug-Resistant (MDR) Stenotrophomonas maltophilia in Cancer Patients. [Abstract #]. . The 43rd Annual Meeting of the Infectious Diseases Society of America (IDSA), San Francisco,, 2005.
89. Hachem, R, Boktour M, Daugherty T, Pham-Williams T, Warneke C, Chemaly R, Raad I. The Utility of Galactomannan Enzyme Immunoassay (GM-EIA) and (1-3) B-D-glucan (BG) in the Diagnosis of Invasive Fungal Infections in Cancer Patients. Proceedings of the 45th Interscience Conference on Antimicrobial Agents and Chemotherapy [Abstract], New Orleans, LA,:September 21-24, 2005., 2005.
90. Raad II, Boktour MR, Hanna HA, Kontoyiannis DP, Hachem RY. Posaconazole (POS) compared to amphotericin B lipid formulations (AmB/LPD) in combination with caspofungin (CASP) as salvage therapy for invasive aspergillosis (IA) in patients (pts) with hematologic malignancy (HM). 2nd Advances Against Apsergillosis, Athens, Greece, 2/2006.
91. Boktour M, Hanna H, Kontoyiannis D, Hachem R, Raad I. Posaconazole (POS) compared to amphotericin B lipid formulations (AmB/LPD) in combination with itraconazole (IT) as salvage therapy for invasive aspergillosis (IA) in patients (pts) with hematologic malignancy (HM). 2nd Advances Against Apsergillosis, Athens, Greece, 2/2006.
92. Hachem R, Hanna H, Jiang Y, Dvorak T, Reitzel R, Chaiban G, Sherertz R, Raad I. Activity of rifampin against MRSA embedded in biofilm: the risk of resistance if used alone and benefit of synergy if used in combination. 46th Interscience Conference on Antimicrobial Agents and Chemotherapy, San Francisco, California, 9/2006.
93. Reitzel R, Shukrallah B, Hanna H, Dvorak T, Hachem R, Raad I. Gloves impregnated with antiseptic dyes are highly effective in the prevention of adherence of nosocomial resistant bacteria. 46th Interscience Conference on

Antimicrobial Agents and Chemotherapy, San Francisco, California, 9/2006.

94. Raad I, Hanna H, Boktour M, H. Torres, Afif C, Kontoyiannis D, Hachem R. Posaconazole (POS) compared to high dose lipid formulations of amphotericin B (HD-LPAMB) as salvage therapy for invasive aspergillosis (IA) in patients (pts) with hematologic malignancy (HM). IN. 46th Interscience Conference on Antimicrobial Agents and Chemotherapy, San Francisco, California, 9/2006.
95. Raad I, Hanna H, Boktour M, Torres H, Kontoyiannis D, Hachem R. The combination of caspofungin (C) and voriconazole (V) as primary and salvage therapy of invasive aspergillosis (IA) in hematologic malignancy patients (HMP). 46th Interscience Conference on Antimicrobial Agents and Chemotherapy, San Francisco, California, 9/2006.
96. Shukrallah B, Hanna H, Ghannam D, Chatzinikolaou I, Hachem R, Raad I. Clinical response (CR) within 24 hours following catheter removal is useful in diagnosing catheter-related bloodstream infection (CRBSI). 44th Annual Meeting of the Infectious Diseases Society of American, Toronto, Ontario, Canada, 10/2006.
97. 104. Shukrallah B, Hanna H, Ghannam D, Chatzinikolaou I, Hachem R, Raad I. Clinical response (CR) within 24 hours following catheter removal is useful in diagnosing catheter-related bloodstream infection (CRBSI). Proceedings of the 44th Annual Meeting of the Infectious Diseases Society of American. Toronto, Ontario, Canada, 10/2006.
98. Ghanem G, Hachem R, Jiang Y, Safdar A, Chemaly R, Raad I. Comparative analysis of vancomycin resistant Enterococcus (VRE) faecalis vs VRE faeciumin cancer patients. 44th Annual Meeting of the Infectious Diseases Society of American, Toronto, Ontario, Canada, 10/2006.
99. Ghanem G, Hachem R, Jiang Y, Safdar A, Chemaly R, Raad I. Comparative analysis of vancomycin resistant Enterococcus (VRE) faecalis vs VRE faeciumin cancer patients. Proceedings of the 44th Annual Meeting of the Infectious Diseases Society of American. Toronto, Ontario, Canada, 10/2006.
100. Hachem RY, Boktour MR, Hanna HA, Kontoyiannis DP, Keutgen X, Shukrallah B, Hanna E, Raad II. Sinus surgery (SS) improves the outcome of invasive Aspergillus sinusitis in neutropenic patients with hematologic malignancy (HM). 44th Annual Meeting of the Infectious Diseases Society of American, Toronto, Ontario, Canada, 10/2006.
101. Ghanem G, Graviss L, Chemaly R, Hanna H, Dvorak T, Hulten K, Hachem R, Raad I. The role of molecular methods in the prevention of nosocomial methicillin resistant Staphylococcus aureus (MRSA) clusters in cancer patients. Proceedings of the 44th Annual Meeting of the Infectious Diseases Society of American. Toronto, Ontario, Canada, 10/2006.
102. Shukrallah B, Ghannam D, Hackett B, Keutgen X, Jiang Y, Hachem R, Chemaly R, Kontoyiannis D, Hanna H, Raad I. The utility of >100 CFU from the central venous catheter (CVC) in establishing the diagnosis of catheter-related bloodstream infection (CRBSI). Proceedings of the 44th Annual Meeting of the Infectious Diseases Society of American. Toronto, Ontario, Canada, 10/2006.
103. Youssef S, Hachem R, Chemaly R, Adachi J, Jacobson K, Jiang Y, Rolston K, Safdar A, Kontoyiannis D, Raad I. Vitamin B6 was not effective for the prevention of hematologic toxicities of linezolid (LNZ) in cancer patients (pts). Proceedings of the 44th Annual Meeting of the Infectious Diseases Society of American, 10/2006.
104. Hachem R, Chemaly RF, Jiang Y, Reitzel R, Dvorak T, Fang X, Raad II. Anti-adherence Activity and Antimicrobial Durability of Anto-infective-Coated Catheters Against Multidrug-Resistant Bacteria. Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC). Chicago, Illinois, 9/2007.
105. Raad I, Hachem R, Jiang Y, Kantarjian H, Champlin R, Kontoyiannis D. Combination Salvage Therapy of Invasive Aspergillosis (IA) in Patients (pts) with Hematologic Malignancy (HM): Which Caspofungin-Containing Regimen? Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC). Chicago, Illinois, 9/2007.
106. Kontoyiannis DP, Chemaly RF, Jiang Y, Reitzel R, Kantarjian H, Raad II. Galactomannan Enzyme Immunoassay (GM-EIA): Low Sensitivity for Aspergillus fumigatus Infection in Cancer Patients. Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC). Chicago, Illinois., 9/2007.
107. Rangaraj GR, Hachem R, Ghannam D, Jiang Y, Raad II. Breakthrough Bacteremia Epidemiology and Risk Factors in Cancer Patients. San Diego, CA., 10/2007.
108. Chemaly RF, Sharma PS, Youssef S, Gerber D, Hachem R, Raad II. Catheters Coated with Minocycline and Rifampin for the Prevention of Catheter Related Bacteremia (CRB) in Cancer Patients receiving High Dose Interleukin (IL-2). Infectious Diseases Society of America (IDSA) 45th Annual Meeting. San Diego, CA, 10/2007.
109. Ghannam DE, Hachem R, Jiang Y, Rangaraj GR, Raad II. CoagulaseNegative Staphylococcal Bacteremia in Cancer Patients: Optimal Duration of Antibiotic Therapy and Effect of Central Venous Catheter Removal. Infectious Diseases Society of America (IDSA) 45th Annual Meeting. San Diego, CA., 10/2007.
110. Raad II, Hachem R, Reitzel R, Dvorak T, Jiang Y, Fang X, Ramos E, Chemaly RF. Gardine Antiseptic Gloves Protect Health Care Workers from Resistant Pathogens. . Infectious Diseases Society of America (IDSA) 45th

Annual Meeting. San Diego, CA., 10/2007.

111. Ramos E, Youssef S, Jiang Y, Wright S, Pham-Williams T, Fang X, Hachem R, Raad. Micrococcus sp Bacteremia in Cancer Patients: The Role of Catheters and Cytokines (GCSF). Infectious Diseases Society of America (IDSA) 45th Annual Meeting. San Diego, CA., 10/2007.
112. Adachi JA, Vigil KJ, Aboufaycal H, Dvorak T, Hachem R, Tarrand JJ, Perego CA, Williams PA, Chemaly RF, Rolston KV, Raad II. Molecular Epidemiology of a Clonal Outbreak of Epidemic Multidrug-Resistant (MDR) Escherichia coli Causing Bloodstream Infection in Cancer Patients. . Infectious Diseases Society of America (IDSA) 45th Annual Meeting, San Diego, California, 10/2007.
113. Ramos E, Hachem R, Mulanovich V, Adachi J, Kontoyiannis D, Rolston K, Safdar A, Raad I, Chemaly RF. MRSA Pneumonia in Cancer Patients: High Failure rate with Vancomycin. Infectious Diseases Society of America (IDSA) 45th Annual Meeting, San Diego, California, 10/2007.
114. Raad I, Hachem R, Reitzel R, Dvorak T, Jiang Y, Fang X, Ramos E, Chemaly RF. Gardine Antiseptic Gloves Protect Health Care Workers (HCW) from Resistant Pathogens. Infectious Diseases Society of America (IDSA) 45th Annual Meeting, San Diego, California, 10/2007.

Book Chapters

1. Hachem RY, Raad II. Infection of the salivary and lacrimal glands. In: Current Therapy of Infectious Disease, 2nd Edition. Mosby, Inc, pp. 27-31, 2001.

Books (edited and written)

N/A

Letters to the Editor

1. Hachem, R, Raad I, Husni R, Whimbey E, Jacobson K, Rolston K. Quinupristin/dalfopristin (QD) plus minocycline (M) in the treatment of vancomycin-resistant Enterococcus faecium (VREF) infection in cancer patients. Proceedings of the 36th Annual Meeting of the Infectious Diseases Society of America (IDSA), Denver, Colorado,, 11/1998.

Manuals, Teaching Aids, Other Teaching Publications

N/A

Other Publications

N/A

EDITORIAL AND REVIEW ACTIVITIES

Editor/Service on Editorial Board(s)

N/A

Member of Editorial Review Board

N/A

Journal Reviewer

N/A

Other Editorial and Review Activities

Reviewer, Biomaterials , 2005-2007

Reviewer, CID (Clinical Infection Diseases), 2005-2007

Reviewer, European Journal of Clinical Microbiology Infectious Diseases, 2005-2007

Reviewer, ICHE, 2005-2007

Reviewer, Therapy, 2005-2007

Reviewer, Transplantation, 2005-2007

TEACHING

Teaching Within Current Institution - The University of Texas M. D. Anderson Cancer Center

Formal Teaching

Courses Taught

N/A

Training Programs

N/A

Other Formal Teaching

N/A

Supervisory Teaching Committees

Advisory Committees
N/A

Supervisory Committees
N/A

Examining Committees
N/A

Direct Supervision

Undergraduate and Allied Health Students
N/A

Medical Students
N/A

Graduate Students
N/A

Postdoctoral Research Fellows
N/A

Clinical Residents and Fellows
N/A

Other Supervisory Teaching
N/A

Teaching Outside of Current Institution

Formal Teaching

Courses Taught
N/A

Training Programs
N/A

Other Formal Teaching
N/A

Supervisory Teaching Committees

Advisory Committees
N/A

Supervisory Committees
N/A

Examining Committees
N/A

Direct Supervision

Undergraduate and Allied Health Students
N/A

Medical Students
N/A

Graduate Students
N/A

Postdoctoral Research Fellows
N/A

Clinical Residents and Fellows
N/A

Other Supervisory Teaching
N/A

CONFERENCES AND SYMPOSIA

Organization of National or International Conferences/Symposia (Include chairing session)

Worldwide Institute for Medical Education, General Organization of Teaching Hospitals and Institutes, Cairo, Egypt, Egypt, Presenter, 10/2003

ENZON, Speaker Development Program, San Juan, Puerto Rico, Puerto Rico, Speaker, 3/2004

European Congress, 14th European Congress of Clinical Microbiology and Infectious Diseases, Prague, Czech Republic, Speaker, 5/2004

International Immunocompromised Host Society Meeting, 13th International Immunocompromised Host Society Meeting, Granada, Spain, Speaker, 6/2004

International Immunocompromised Host Society Meeting, 14th International Immunocompromised Host Society Meeting, Crans-Montana, Speaker, 7/2006

Presentations at National or International Conferences**Invited**

N/A

Other, Including Scientific Exhibitions

Novel Antifungal Agents, Worldwide Institute of Medical Education at the general Organization of Teaching Hospitals and Institutes at the general Organization of Teaching Hospitals and Institutes, Cairo, Egypt, 10/30/2003

Fungal Infections in At-Risk Patients: Meeting the Challenge with ABELCET, Speaker development program sponsored by ENZON, San Juan, Puerto Rico, 3/27/2004

Posaconazole as salvage therapy for Pseudallescheria infections: A case series, 14th European Congress of Clinical Microbiology and Infectious Diseases, Prague, Czech Republic, 5/1/2004

13th International Immunocompromised Host Society Meeting, Granada, Spain, 6/27/2004

Seminar Invitations from Other Institutions

N/A

Lectureships and Visiting Professorships

N/A

Other Presentations at State and Local Conferences

Novel Antifungal Agents, The General Organization of Teaching Hospitals and Institutes at the general Organization of Teaching Hospitals and Institutes, Worldwide Institute for Medical Education, Cairo, Egypt, 2003

Fungal Infections in At-Risk Patients: Meeting the challenge with ABELCET, Speaker Development Program, Enzon, Speaker Development Program, San Juan, Puerto Rico, 2004

Immunocompromised, 13th International Immunocompromised Host Society Meeting, International Immunocompromised Host Society, Granada, Spain, 2004

Posaconazole as salvage therapy for Pseudallescheria infections: A case series, 14th European Congress of Clinical Microbiology and Infectious Diseases, European Congress of Clinical Microbiology, Prague, Czech Republic, 2004

Immunocompromised, 14th International Immunocompromised Host Society Meeting, International Immunocompromised Host Society, Crans-Montana, Switzerland, 2006

PROFESSIONAL MEMBERSHIPS/ACTIVITIES**Professional Society Activities, with Offices Held****National and International**

American Society for Microbiology

Houston Infectious Disease Society

Infectious Disease Society of America

Texas Infectious Disease Society

The Transplantation Society (Infectious Disease Society)

Local/State

N/A

UNIQUE ACTIVITIES

1. Languages: Spanish (4th language); English (3rd language); French (2nd language); and Arabic (1st language)

DATE OF LAST CV UPDATE

9/13/2007

